

ULTRASONIC DIAGNOSTIC IMAGING OF RESPONSE FREQUENCY
DIFFERING FROM TRANSMIT FREQUENCY

Abstract of the disclosure:

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10 An ultrasonic diagnostic imaging system and
methods are described which produces ultrasonic
images from harmonic echo components of a transmitted
fundamental frequency. Preferably, a programmable
digital filter is used to pass harmonic echo
15 components for image processing to the exclusion of
fundamental frequency signals. In a preferred
embodiment, artifacts are removed by producing
decorrelated replicas of the harmonic signals, which
are then combined and used for imaging. To produce
an image in the presence of depth dependent
attenuation of high frequency echo signals, both
fundamental and harmonic echo signals are processed
and used to produce an image blended from components
20 of both fundamental and harmonic echo signals.